(No Model.)

P. M. REAGAN.

CAR COUPLING.

No. 469,409. Patented Feb. 23, 1892.

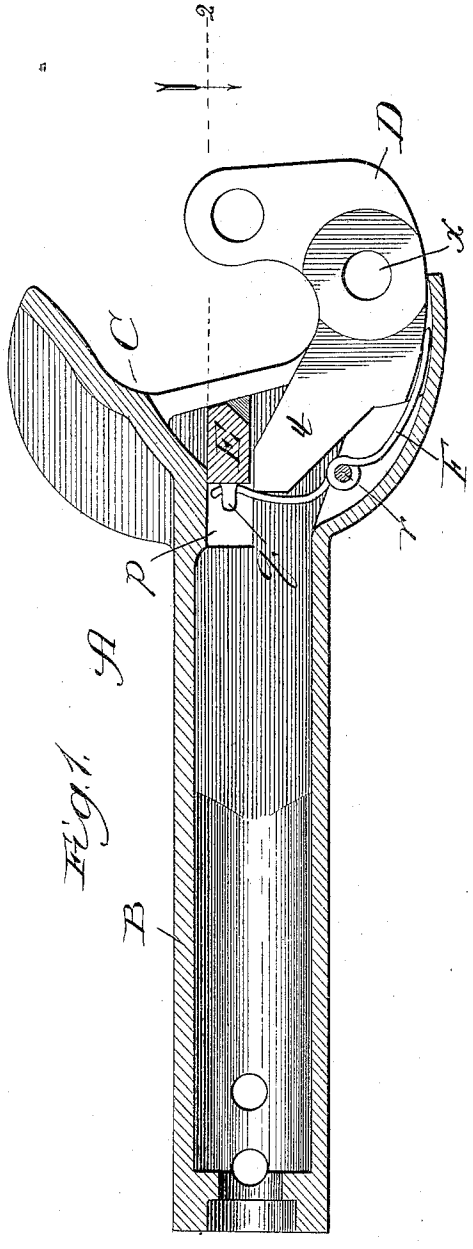

Fig. 1.

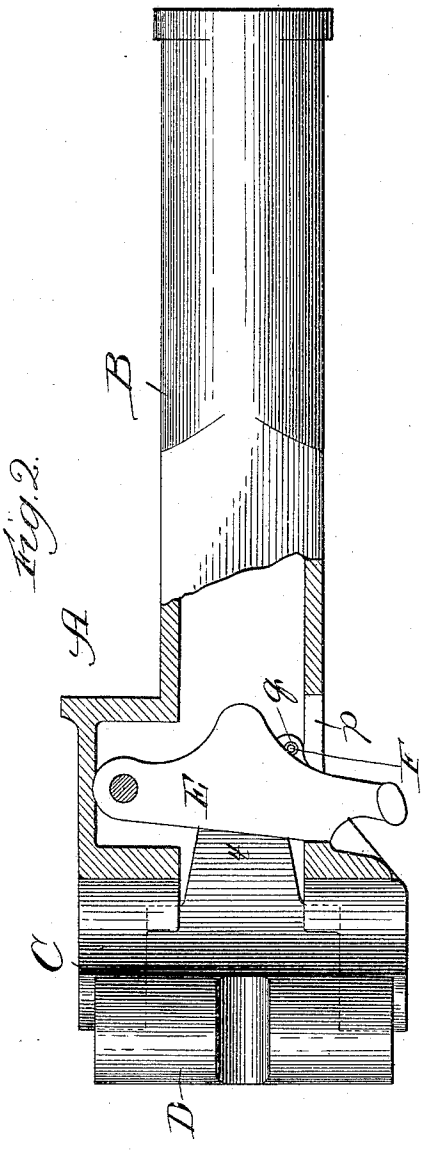

Fig. 2.

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UNITED STATES PATENT OFFICE.

PAUL M. REAGAN, OF CHICAGO, ILLINOIS, ASSIGNOR TO THE HINSON CAR COUPLER COMPANY, OF DES MOINES, IOWA.

CAR-COUPLING.

SPECIFICATION forming part of Letters Patent No. 469,409, dated February 23, 1892.

Application filed October 31, 1891. Serial No. 410,452. (No model.)

To all whom it may concern:

Be it known that I, PAUL M. REAGAN, a citizen of the United States, residing at Chicago, in the county of Cook and State of Illinois, have invented a new and useful Improvement in Car-Couplers, of which the following is a specification.

My invention relates to an improvement in the type of car-coupler involving a horizontally-swinging pivotal knuckle or jaw on a draw-head and locking means for the pivotal jaw in its coupled position adapted to be operated at will to release the jaw for uncoupling.

More definitely stated, my invention relates to improved means for automatically opening or swinging outward the jaw when unlocked to adjust it into position to co-operate with the jaw of the companion coupler in mutually locking each other, thus to avoid any necessity on the part of an operator for entering between cars for the purpose of producing such adjustment by hand.

My object is to provide simple, durable, and reliably-operating spring mechanism for producing the automatic adjustment referred to of the knuckle.

My improvement is illustrated in the accompanying drawings, in which—

Figure 1 is a longitudinal sectional view of a car-coupler provided with my improved spring mechanism; and Fig. 2 is a broken sectional view of the same, the section being taken at the line 2 on Fig. 1 and viewed in the direction of the arrow.

A is a car-coupler, which may involve any suitable form and construction in the type referred to and comprising as its essential elements a draw-bar B, terminating in a head C, on one side of which is pivoted the swinging jaw D, and provided with a lock E.

In the rear portion of the draw-head I provide behind the jaw D a stud *r*, around which is loosely coiled with one or more, and preferably three, coils a spring F, extending at one end and there bearing against the back of the jaw behind the pivot *x* of the latter and at its opposite end against the lock E, the manner shown of applying it to the peculiar lock illustrated being that of passing it through a guide *q* on the rear side of the lock.

According to the construction of this class of car-couplers the lock E, whether pivotal and vertical, as shown, or of other form, affords, normally, an obstruction against movement of the jaw by extending across the path of the latter, and to permit the jaw to be swung outward from its locked or coupling position illustrated necessitates the withdrawal of the lock from the path of the jaw. In the lock E illustrated which is pivotally supported near its upper end to extend thence vertically through an elongated opening *p* provided for it in the draw-head, the unlocking is effected by swinging the lock backward on its pivot, suitable or ordinary means (not shown) being provided to operate it from beyond the car, thereby withdrawing it from the path of the tail-piece *t* of the jaw. The latter is then free to be swung outward. In drawing the lock E backward it obviously sets the spring F, causing the end thereof in contact with the jaw to bear with increasing force against the latter until it is released by the withdrawal of the lock in the elongated opening *p* from its path, when the resilient force of the spring is free to act, and does act, to swing the jaw outward on its pivot, thus producing automatic opening of the coupler.

A peculiar advantage of the construction illustrated as my improvement arises from the fact that it maintains the spring normally in a condition without tension, whereby obviously its lasting qualities are greatly enhanced, the setting of the spring, as will be understood, being only produced preparatory to the need for utilizing its resilient force.

Combined, as shown, with the particular form of lock E illustrated, the spring F performs, in addition to the function described, that of forcing the lock when released back to its normal position, after being removed therefrom by being set from the jaw in the turning of the latter when being coupled to its coupling position.

What I claim as new, and desire to secure by Letters Patent, is—

1. In a car-coupler, the combination, with the swinging jaw and lock therefor, of a spring engaging the jaw and lock and operating when the jaw is unlocked to swing it outward, substantially as described.

2. In a car-coupler, the combination, with the swinging jaw and lock therefor, of a spring normally unset in its operative position and engaging the jaw and lock and set by withdrawing the lock to swing outward the jaw when unlocked, substantially as described.

3. In a car-coupler, the combination, with the swinging jaw and lock therefor, of a spring F, loosely coiled about a fulcrum *r* and bearing at opposite ends, respectively, against the lock and jaw, whereby withdrawal of the lock sets the spring and its resilient force actuates the jaw to swing outward when released by the lock, substantially as described.

4. In a car-coupler, the combination, with the swinging jaw D and vertically-suspended lock E, of a spring F, loosely coiled about a fulcrum *r* and bearing at opposite ends, respectively, against the rear sides of the lock and jaw, whereby withdrawal of the lock sets the spring and its resilient force actuates the jaw to swing outward when released from the lock and returning the jaw to its coupling position sets the spring to return the lock to its locking position, substantially as described.

PAUL M. REAGAN.

In presence of—
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J. N. HANSON.